



TYCO 18031 (AT 43)  
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Bricker et al. :  
Serial No.: 10/659,156 : Art Unit: 2831  
Filed: September 10, 2003 : Examiner: Nguyen, Chau N.  
For: CABLE JACKET WITH :  
INTERNAL SPLINES :

**DECLARATION OF PRIOR INVENTION**

(37 C.F.R. § 1.131)

Hon. Assistant Commissioner for Patents  
Washington, D.C. 20231

Richard Walter Speer, whose address is 5154 Nicole Road, Kernersville, North Carolina 27284 declares as follows:

1. This declaration is to establish conception of the invention claimed in the above-referenced application at a date prior to March 14, 2003.
2. I have reviewed and understand the patent application referenced in the caption above (hereafter "Subject Application"), including the specification, abstract, drawings and claims therefor.
3. I have reviewed United States Patent Application Publication No. 2004/0055779 titled "Communication Wire" filed on March 14, 2003 and published March 25, 2004, which, on information and belief, is being relied on in at least one rejection of the claims of the Subject Application (hereafter "Antedated Reference").
4. I am a co-inventor with Michael Wayne Bricker of the invention(s) recited in the claims of the Subject Application (hereafter "Claimed Invention").

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5. The Claimed Invention of the Subject Application was conceived by my co-inventor and I before March 14, 2003 which is the filing date of the Antedated Reference.

6. The Claimed Invention was conceived in the United States.

7. As evidence that the Claimed Invention of the Subject Application was conceived before the filing date of the Antedated Reference, attached is a true and accurate copy of a preliminary invention disclosure (PID number 2002246) (hereafter "PID 2002246") that was prepared in connection with the Subject Application (see Attachment A).

8. PID 2002246 is dated December 13, 2002 and is entitled "Involute Spline Jacket" and includes one page of text and two pages of drawings attached thereto describing and illustrating the invention that was conceived.

9. The drawings attached to PID 2002246 are hand drawn sketches recorded in notebooks carried by my coinventor and I.

10. One of the sketches attached to PID 2002246 is dated May 5, 2002 and illustrates a cross sectional view of a cable having a center round filler, insulated cable conductors surrounding the filler, and a cable jacket having internally extending splines to prevent the cable core from twisting relative to the cable jacket to maintain electrical headroom of the cable.

11. The sketch dated May 5, 2002 includes my signature on the upper right hand corner of the page, and my signature was placed thereupon on the same date.

12. The other of the sketches is dated June 10, 2002 and includes two views of a cable according to the present invention, namely an end view and a side view with part of the cable jacket peeled away from the cable core.

13. The sketches dated June 10, 2002 show triangular shaped splines extending inwardly from a cable jacket in the end view, and in the side view one of the splines is shown in the

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horizontal center of the cable, and other of the splines arc shown in phantom at the upper and lower portions of the cable.

14. The sketches dated June 10, 2002 includes the signature of my coinventor on the lower right hand corner.

15. As indicated in the PID 2002246, at least one working model or prototype of the invention was constructed on or about July 8, 2002.

16. The working model or prototype of the invention was completed in the United States.

17. The working model or prototype of the invention included the features shown in the sketches dated May 5, 2002 and June 10, 2002.

18. The working model of the invention worked for its intended purpose to prevent twisting of the cable core relative to the cable jacket and to preserve electrical headroom of the cable.

19. The PID 2002246 is witnessed by four different persons having knowledge of the working model or prototype of the invention.

20. As further evidence that the Claimed Invention of the Subject Application was conceived and reduced to practice before the filing date of the Antedated Reference, attached hereto as exhibit B are true and accurate copies of production drawings including two drawing sheets of cable according to the Claimed Invention.

21. The production drawings are dated February 20, 2003 in the drawing legend at the bottom of the drawing sheets.

22. The production drawings are included in the Subject Application to describe and illustrate the Claimed Invention.

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23. Cable having the features shown in the production drawings was actually constructed in the United States at a date prior to March 14, 2003.

24. The cable constructed from the production drawings worked for its intended purpose to prevent twisting of the cable core relative to the cable jacket and to preserve electrical headroom of the cable.

25. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on Information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

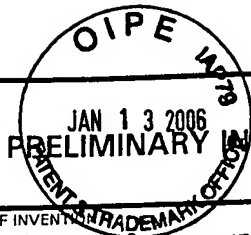
  
Richard Walter Spicer      03 JAN 06  
(Date)

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**ATTACHMENT A**

P010002

TWC 3 (12/95)



PRELIMINARY INVENTION DISCLOSURE

COMPLETE AND RETURN TO:

The Whitaker Corporation (M/S 324-01)  
4550 New Linden Hill Road, Suite 450  
Wilmington, DE 19808

DESCRIPTIVE TITLE OF INVENTION

DATE

Involute SPLINE Jacket

12-13-02

WHAT IS THE PROBLEM WITH THE STATE OF THE ART, OR PRIOR ART TECHNOLOGY? WHAT IS THE PURPOSE OF THE INVENTION?

See Attachment #1

WHAT ARE THE NEW FEATURES OF THE INVENTION WHICH OVERCOME THIS PROBLEM?

See Attachment #2

ON SEPARATE DRAWINGS OR SKETCHES, DESCRIBE THE FEATURES OF THE INVENTION AND HOW THEY WORK. ARE THESE ENCLOSED?

☒ YES

☐ NO

IDENTIFY THE CLOSEST PRIOR ART TECHNOLOGY, IF ANY, OF WHICH YOU ARE AWARE. PROVIDE COPIES IF AVAILABLE.

N/A

ENTER THE DATE OF THE FIRST WRITTEN DESCRIPTION OR THE FIRST DATED SKETCH OF INVENTION AND ATTACH COPIES.

5-1-02

ENTER THE DATE A WORKING MODEL, DEVICE OR PROCESS WAS OR WILL BE COMPLETED.

7-8-02

GIVE A BRIEF DESCRIPTION OF CIRCUMSTANCES OF INITIAL DISCLOSURE OUTSIDE AMP COMPANIES

None

ARE LATEST DRAWINGS ENCLOSED?

☒ YES

☐ NO

ARE THEY CAD?

☐ YES

☒ NO

IF CAD, WHO SHOULD BE CONTACTED TO RETRIEVE CAD FILES?

INVENTOR'S FULL NAME (incl. full middle name)

Michael Wayne Bricker

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AMP EMPLOYEE NO.

14165

DIVISION

PCD

MAILSTOP

264-01

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CITIZENSHIP

HOME ADDRESS

SIGNATURE

Michael Bricker

DATE

12-13-02

WITNESS

Allyson F. Boy

WITNESS

Thomas M. Jones

SIGNATURE

Richard W. Speer

DATE

12-13-02

WITNESS

Allyson F. Boy 12/13/02

WITNESS

Thomas M. Jones 12-13-02

SIGNATURE

DATE

WITNESS

WITNESS

DIVISION MGR NAME & PHONE

AL Link 336-665-6631

DIVISION MGR NAME & PHONE

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DIVISION MGR NAME & PHONE

--- FOR THE WHITAKER CORPORATION USE ONLY ---

DEC 20 2002

THE WHITAKER CORPORATION

PID NO.

2002246

ATTORNEY

Joseph A. Tesser

PHONE:

(302) 633-3566

#### Attachment #1

Jacket designs that are used today are smooth on the inside where they are in contact with conductors. This does not hold the conductors in a securer position inside the diameter of the jacket. The new design has ribs inside the jacket that are parallel with the conductors and hold them in a securer position inside the jacket diameter.

#### Attachment #2

The features that have over come the moving of the conductors inside the jacket diameter are rids that are evenly spaced around the inside diameter of the jacket. These spline's run in parallel with the conductors that are inside the jacket diameter.



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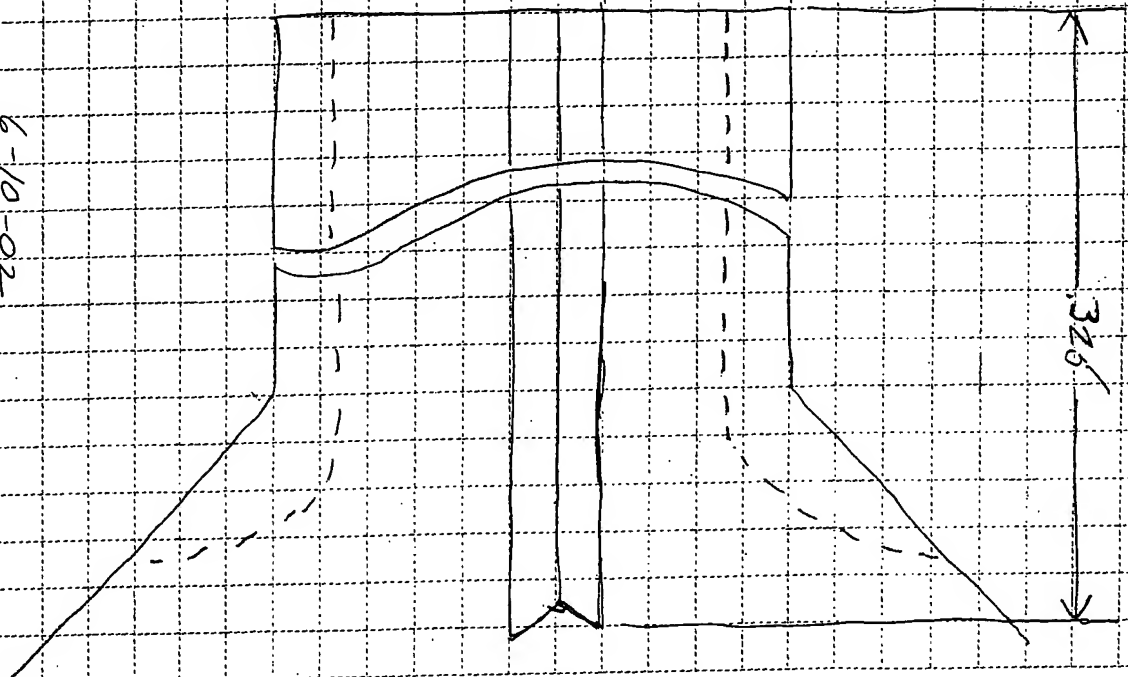
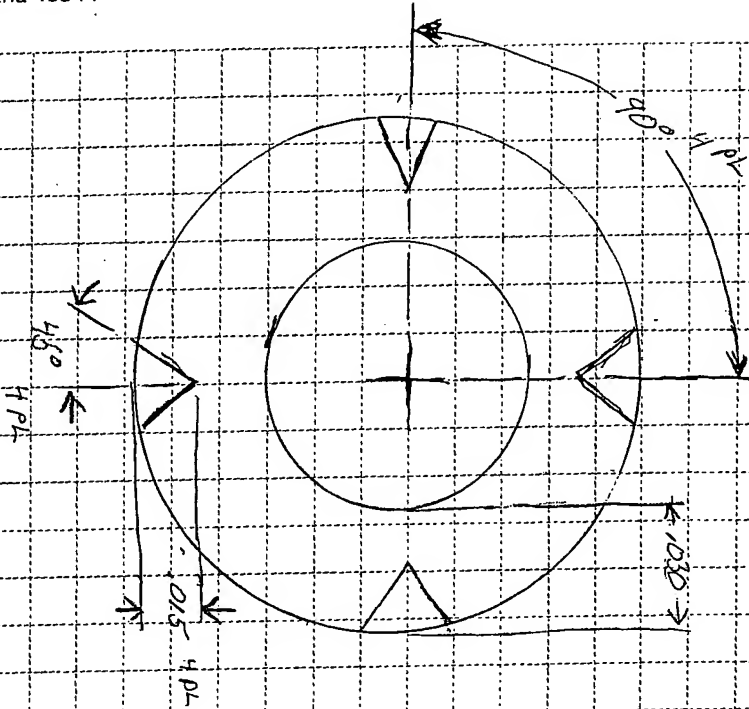
E-mail: precision@championtool.com

**Champion  
tool &  
engineering**  
INC.

1005 West 8th Street, Mishawaka, Indiana 46544



TOOLS  
DIES  
JIGS &  
FIXTURES



6-10-02  
Jacket Tip  
Cat-6 grip design.  
M. D. Brinkley



*RW*

DATE  
05 MAY 02

FILE

REFERENCE  
SPLINE JACKET

INCHES

1

2

3

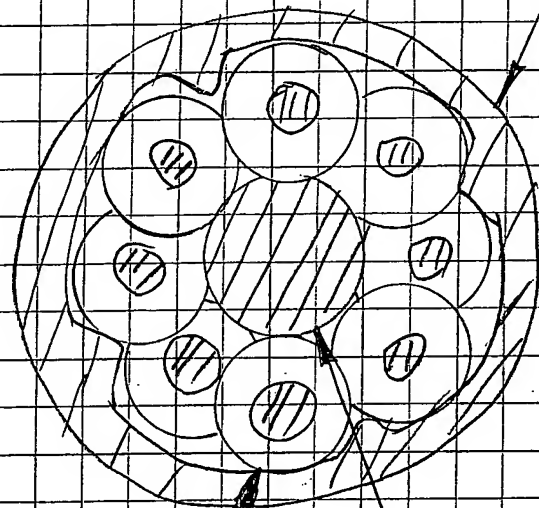
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5

6

7

JACKET WITH EXTRUDED INTERNAL  
RIBS - RIBS PREVENT CONDUCTOR  
CORE FROM TWISTING DURING  
HANDLING, MAINTAINING  
ELECTRICAL HEADROOM.



INSULATED  
CONDUCTORS

CENTER ROUND  
FILLER (EXISTING)

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**ATTACHMENT B**



RIBS INTERNAL TO  
JACKET 3 OF 4 SHOWN

JACKET W/INTERNAL SPLINE

83711-

— TWISTED PAIRS (4)

CROSS-SECTION  
CAT 6 CABLE

DATE	207/12/13	MATERIAL	HEAT TREAT		
BY					
NO					
BY					
NO					
DATE					
		Type Extrusion Corporation Hartshorn, Pa. 17105-3000			
		<del>207/12/13</del> 207/12/13			
		=			
SCALE	1:1	SHEET	1	OF	1
	A2				

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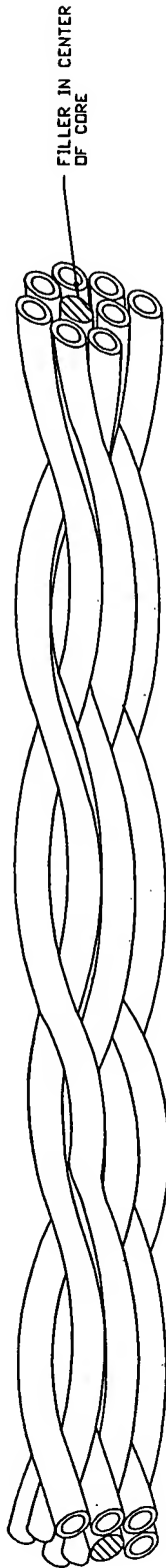
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CABLE CORE (4 TWISTED PAIRS AND FILLER) ARE "CABLED" TOGETHER WITH A LEFT HAND LAY. THE JACKET IS THEN EXTRUDED AROUND THE CORE. THE INTERNAL JACKET SPLINE IS LONGITUDINAL TO THE CABLE CENTER AXIS.



4 RIBS LONGITUDINAL AROUND CABLE CORE  
THE RIBS "LOCK" IN THE CORE PREVENTING IT FROM ROTATING INSIDE THE JACKET  
INDEPENDANTLY. THIS MAKES THE CABLE MECHANICALLY SOUND PRESERVING THE ELECTRICAL CHARACTERISTICS FROM DEGRADING WHEN HANDLED, IN A SIMPLE TERM IT PROTECTS THE CABLES "HEADROOM".

THIS DRAWING IS A CONTROLLED DOCUMENT.		REVISED FOR PUBLICATION		REVISED FOR PUBLICATION		REVISED FOR PUBLICATION		REVISED FOR PUBLICATION	
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